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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/654,949	09/01/2000	Peter Brittingham	ETS-TCA	7078
21269	7590	03/07/2006	EXAMINER	
PEPPER HAMILTON LLP ONE MELLON CENTER, 50TH FLOOR 500 GRANT STREET PITTSBURGH, PA 15219			HARRIS, CHANDA L	
			ART UNIT	PAPER NUMBER
			3715	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/654,949	Applicant(s) BRITTINGHAM ET AL.	
	Examiner Chanda L. Harris	Art Unit 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 13-17, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 13-17, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

In response to the Amendment filed 10/26/05, Claims 1-5, 13-17, and 19-20 are pending. Claims 6-12 and 18 are cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 13-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al. (US 5,779,486) in view of Sanchez-Lazer et al. (US 6,000,945). The rejection from the previous office action is maintained and is incorporated herein by reference.

1. [Claims 1,5,13-14,16]: Regarding Claims 1, 5, 13-14, and 16, Ho discloses obtaining a test item (i.e., question entry). See Col.13: 1-4. Ho discloses creating a test item model (i.e., qschema) by identifying elements of the test item to be variabilized, variabilizing the elements to create variables, and defining the variables and generating a test item variant (i.e., actual question body to be used in the test); and generating a test item variant. See Col.13: 7-16. Ho discloses means for displaying, accepting and

retrievably storing (i.e., via schema table) valid test item solutions (i.e., answers) and the accepted test item model. See Col.13: 1-16.

Ho does not disclose expressly using a simultaneous constraint solver. However, Sanchez-Lazer teaches such in Col.3: 39-51 and Col.7: 1-8. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate a simultaneous constraint solver into the method and system of Ho, in light of the teaching of Sanchez-Lazer, in order to provide a mechanism for automated item selection.

Applicant argues that Claim 1 requires the use of a simultaneous constraint solver for test item generation. To recite accurately, Claim 1 requires “generating a test item variant using a simultaneous constraint solver.” Also, regarding claim 1, Applicant does not further distinguish a test item variant from what is taught in Sanchez-Lazer. Consequently, Examiner considers the test items that are generated from the developed constraints in Sanchez-Lazer to be test item variants. See Col.3: 39-51 and Col.7: 1-8. Sanchez-Lazer teaches a simultaneous constraint solver in Col.3: 39-51 and Col.7: 1-8. Moreover, Claim 1 does not provide a relationship between generating a test item variant using a simultaneous constraint solver and the other steps of the claim. Therefore, Examiner maintains that Sanchez-Lazer teaches generating a test item variant using a simultaneous constraint solver.

Regarding Claim 13, Applicant argues that neither Ho et al. nor Sanchez-Lazer disclose simultaneously solving test item model constraints and generating test item solutions. However, Examiner disagrees. Sanchez-Lazer teaches simultaneously

solving test item model constraints and generating test item solutions in Col.3: 39-51 and Col.7: 1-8. Examiner considers test item solutions to be the test items that are generated from the developed constraints. Therefore, Examiner maintains that Sanchez-Lazer teaches simultaneously solving test item model constraints and generating test item solutions.

2. [Claims 2,8,15]: Regarding Claims 2,8, and 15, Ho discloses wherein said model creation further comprises specifying constraints (e.g., cm) that define the relationship (e.g., complexity levels) among the variables. See Col.13: 22-32.

3. [Claim 3]: Regarding Claim 3, Ho discloses the step of accepting and retrievable storing the test item variant (e.g., in the tested-questions-storage medium, in schema table). See Col.13: 1-16, 39-41.

4. [Claims 4,11]: Regarding Claims 4 and 11, Ho discloses accepting and retrievably storing (i.e., in the question-storage medium) the test item model. See Col.12: 46-54.

5. [Claim 17]: Regarding Claim 17, Ho discloses the use of PROLOG IV (i.e., prolog) in Col.7: 55-57. Ho does not disclose expressly simultaneously solving test item model constraints using Test Creation Assistant constraint language (i.e., item selection algorithm). However, Sanchez-Lazer teaches such in Col.3: 41-51.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate a test creation assistant language into the method and system of Ho, in light of the teaching of Sanchez-Lazer, to facilitate item selection.

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6. [Claim 19]: Regarding Claim 19, Ho discloses wherein variables can be defined by values which are variables (e.g., N1). See Col.13:29-30.

7. [Claim 20]: Regarding Claim 20, the range of random number are considered to be new variables for which new constraints are defined as needed (e.g., Ni, N2, N3 ...). See Col.13: 17-35.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- De Almeida (US 6,112,051)
-random problem generator

Response to Arguments

Applicant's arguments filed 10/26/05 have been fully considered but they are not persuasive. See Examiner's response above. **THIS ACTION IS MADE FINAL.**

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

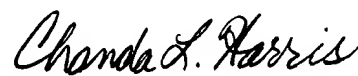
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanda L. Harris whose telephone number is 571-272-4448. The examiner can normally be reached on M-F 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica S. Carter can be reached on 571-272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chanda L. Harris
Primary Examiner
Art Unit 3715